

CNM Conmurra Land System

Area: 79.3 km²

Landscape: Poorly drained, often stony, corridor plains near Conmurra with shallow clayey and calcareous soils over calcrete. The Avenue Range land system lies to the immediate east. Swamps are rare within these plains, compared to the Furner land system plains adjoining on the western side.

Annual rainfall: 615 – 660 mm average

Geology: Pleistocene Padthaway Formation calcareous clays

Main soils: **B5** (43%) Shallow dark clay loam on limestone (Petrocalcic Black-Grey Dermosol)
B2 (40%) Shallow calcareous loam on calcrete (Petrocalcic Calcarosol-Rudosol)

Minor soils: **RR** (7%) Bare calcrete
C5 (4%) Gradational dark clay loam (Calcic-Hypercalcic Brown-Grey-Black Dermosol-Calcarosol)

Summary: Soils are mostly shallow over limestone, have generally low water holding capacity, and are often stony, restricting their use for such things as root crops. Additionally, they are calcareous which constrains cultivation of lime sensitive crops such as lupins. Salinity is low.

Soil Landscape Unit summary: Conmurra Land System (CNM)

SLU	% of area	Component	Main soils	Prop#	Notes	
NBD	3.3	Plain	B2B7	D	<p>NBD Plains with shallow calcareous loam on calcrete, or loam over poorly structured brown clay, on calcrete; 10-30% bleached sand on calcrete, or calcareous loam over calcareous clay on marl. <10% sandy rises with deep sand over brown clay, occasionally shallow bleached sand on calcrete.</p> <p>NBM Stony plain with thin black cracking clay or clay loam over calcreted marl or calcareous lagoonal clayey sediments, often with freshwater shells, with 20-30% rises with very shallow loam over calcrete, occasionally with red clay subsoils on calcrete.</p> <p>Main soils: Plains: <u>Shallow calcareous loam on calcrete - B2</u>, <u>Shallow dark clay loam on limestone - B5</u> and <u>Sand over friable brown clay on calcrete - B7</u>. Sandy rises: <u>Thick sand over clay - G3</u>. Stony rises: <u>Shallow sandy loam on calcrete - B3</u>.</p>	
		Sandy rise	G3	M		
NBM	5.0	Stony plain	B5B2	V		
		Rise	B3	C		
NIG	1.6	Swampy plain	B5	D		<p>NIG Swampy plains or drainage depressions with shallow, dark clay loam mostly over dark clay, on calcrete.</p>
NIM	3.4	Plain	C5	V		<p>NIM Plains with gradational dark clay loam over clay over calcareous clay. 20-30% stony rises with shallow calcareous loam on calcrete.</p> <p>Main soils: Swampy plains: <u>Shallow dark clay loam on limestone - B5</u>. Plains: <u>Gradational dark clay loam - C5</u>. Stony rises: <u>Shallow calcareous loam on calcrete - B2</u> and <u>Rock or exposed calcrete - RR</u>.</p>
		Stony rise	B2RR	C		



NnA	4.7	Plain	C5G3	D	Plains with deep clay loam on dark brown clay, calcareous at depth, or deep sand over brown clay on low rises; 10-30% shallow dark clay loam on calcrete. Main soils: <u>Gradational dark clay loam</u> – C5 and <u>Thick sand over clay</u> - G3 .
NxB	49.7	Stony plain	B5B2	D	Stony plains with shallow dark cracking clay, co-dominant with shallow, grey, calcareous clay on calcrete. Main soils: <u>Shallow dark clay loam on limestone</u> - B5 and <u>Shallow calcareous loam on calcrete</u> - B2 .
NYB	32.2	Stony plain	B2B5	D	Stony plains with shallow grey, calcareous clay on calcrete, co-dominant with shallow, dark cracking clay; 10-30% bare calcrete. Main soils: <u>Shallow calcareous loam on calcrete</u> - B2 and <u>Shallow dark clay loam on limestone</u> - B5 .

PROPORTION codes assigned to Soil Landscape Unit (SLU) components:

- D Dominant in extent (>90% of SLU)
- V Very extensive in extent (60–90% of SLU)
- E Extensive in extent (30–60% of SLU)
- C Common in extent (20–30% of SLU)
- L Limited in extent (10–20% of SLU)
- M Minor in extent (<10% of SLU)

Detailed soil profile descriptions:

- B2** Shallow calcareous sandy loam on calcrete (Petrocalcic Calcarosol)
Up to 40 cm calcareous loamy sand to sandy loam with variable calcrete rubble overlying calcreted calcarenite - rises.
- B3** Shallow sandy loam on calcrete (Petrocalcic Rudosol)
Medium thickness non calcareous sandy loam, often having a slight clay increase with depth, over calcreted calcarenite shallower than 50 cm - rises.
- B5** Shallow dark clay loam on limestone (Petrocalcic, Black Dermosol)
Black clay loam to light clay over calcreted limestone at shallow depth, grading to highly calcareous clay - flats.
- B7** Shallow sand over sandy clay on calcrete (Petrocalcic, Brown Chromosol)
Medium thickness sand overlying brown friable sandy clay to clay on limestone or calcreted sandy clay within 50 cm - flats.
- C5** Gradational dark clay loam (Calcic-Hypercalcic Brown-Grey-Black Dermosol-Calcarosol)
Dark clay loam over abundant 'soft lime'. >10% carbonate is the cut off between this and M2 soils.
- G3** Thick sand over clay (Hypercalcic, Brown Sodosol/ Chromosol)
Thick bleached sand with an organically darkened surface abruptly overlying a massive to coarsely structured brown to reddish yellow sandy clay to clay, calcareous with depth - rises.
- RR** Bare rock

Further information: [DEWNR Soil and Land Program](#)

